

What is claimed is:

1. A porous polyolefin membrane formed by melting and kneading a resin composition containing a polyolefin resin (C) consisting of 30-90 wt % crystalline polypropylene
5 (A) and 10-70 wt % propylene- α -olefin copolymer (B), dispersed in said crystalline polypropylene (A), wherein a ratio of the melt flow rate of said crystalline polypropylene (A) MFR_{pp} to that of said propylene- α -olefin copolymer (B) MFR_{RC} is between 0.1 and 10, to obtain a film-shaped melt, and forming a membrane from said melt, followed by stretching said membrane at least in one direction, which contains
10 continuous pores in the region consisting of said copolymer (B).
2. A porous polyolefin membrane according to Claim 1, wherein a draft ratio range at forming said membrane from said melt is from 1 to 10.
3. A porous polyolefin membrane according to Claim 1, wherein a draft ratio range at forming said membrane from said melt is from 1 to 3.
- 15 4. A porous polyolefin membrane according to Claim 1, wherein the melt flow rate ratio MFR_{pp}/MFR_{RC} is between 0.2 and 5.
5. A porous polyolefin membrane according to Claim 1, wherein said resin composition contains a polyolefin resin (C) consisting of 40-70 wt % crystalline polypropylene (A) and 30-60 wt % propylene- α -olefin copolymer (B).
- 20 6. A porous polyolefin membrane according to Claim 1, wherein said propylene- α -olefin copolymer (B) contains 30-80 wt % of propylene.
7. A porous polyolefin membrane according to Claim 1, wherein said propylene- α -olefin copolymer (B) contains 40-70 wt % of propylene.
8. A porous polyolefin membrane according to Claim 1, wherein said polyolefin resin
25 (C) is obtained by a multistage polymerization process containing a first step to

produce said crystalline polypropylene (A) and an immediately ensuing second step to produce said propylene- α -olefin copolymer (B).

9. A porous polyolefin membrane according to Claim 1, wherein the air resistance (Gurley) is between 1 and 2,000 sec/100 mL and the moisture permeability is between
5 1,000 and 20,000 g/m²·24h.
10. A porous polyolefin membrane according to Claim 1, wherein a temperature at the membrane-break (T_b) is equal to or higher than 150°C and a difference between the membrane-break temperature (T_b) and a pore-shutdown temperature (T_s) is equal to or less than 20°C.
- 10 11. A porous polyolefin membrane formed by melting and kneading a resin composition substantially containing only a polyolefin resin (C) consisting of 30-70 wt % crystalline polypropylene (A) and 30-70 wt % propylene- α -olefin copolymer (B), dispersed in said crystalline polypropylene (A), wherein the ratio of the melt flow rate of said crystalline polypropylene (A) MFR_{pp} to that of said propylene- α -olefin
15 copolymer (B) MFR_{RC} is higher than 10 and equal to or less than 1,000, to obtain a film-shaped melt, and forming a membrane from said melt, followed by stretching said membrane at least in one direction, which contains continuous pores in the region consisting of said copolymer (B).
12. A porous polyolefin membrane according to Claim 11, wherein the draft ratio range
20 at forming a membrane from said melt is from 1 to 10.
13. A porous polyolefin membrane according to Claim 11, wherein the draft ratio is between 1 and 5.
14. A porous polyolefin membrane according to Claim 11, wherein said propylene- α -olefin copolymer (B) contains 30-80 wt % of propylene.
- 25 15. A porous polyolefin membrane according to Claim 11, wherein said propylene- α -

olefin copolymer (B) contains 40-70 wt % of propylene.

16. A porous polyolefin membrane according to Claim 11, wherein said polyolefin resin (C) is obtained by a multistage polymerization process containing a first step to produce said crystalline polypropylene (A) and an immediately ensuing second step to
- 5 produce said propylene- α -olefin copolymer (B).

17. A porous polyolefin membrane according to Claim 11, wherein the air resistance (Gurley) is between 10 and 20,000 sec/100 mL and the moisture permeability is between 200 and 10,000 g/m²·24h.